



**HPUD – CORRELL ESTATES  
RETENTION BASIN IMPROVEMENT PROJECT –  
FY 2014-2015**

**DATE: NOVEMBER 11, 2014**

**ENGINEER'S OPINION OF PROBABLE QUANTITY**

1. REMOVE AND DISPOSE OF EXISTING P.C.C. HEADWALL STRUCTURE.  
1 EACH
2. REMOVE AND DISPOSE OF EXISTING 18-INCH STORM DRAIN PIPELINE.  
47 L.F.
3. HPUD PUBLIC WORKS DEPARTMENT SHALL REMOVE OR RELOCATE THE EXISTING SHRUBS/PLANT/TREES.  
19 EACH
4. CONTRACTOR TO REMOVE (CUT) NATIVE MATERIAL AS NECESSARY TO ACHIEVE DESIGN GRADES PER GRADING PLAN SHEET NO. 3.  
4,024 CYD (PER AUTOCAD)
5. CONTRACTOR TO REMOVE AND RELOCATE EXISTING 6-FOOT HIGH 12-FOOT WIDE SWING GATE.  
1 EACH
6. CONTRACTOR SHALL CORE THE EXISTING STORM JUNCTION MANHOLE.  
2 EACH

1. INSTALL 6-INCHES OF CLASS 2 BASE MATERIAL. COMPACT THE CLASS 2 BASE MATERIAL TO 95 PERCENT MAXIMUM DENSITY PER ASTM 0-1557.

$$\frac{13,522 \text{ FT}^3 \times 0.5 \text{ FT} \times 138 \#/\text{FT}^3}{2000 \#/\text{TON}} = 466.51 \text{ TONS} \approx 467 \text{ TONS}$$

467 TONS x 1.15 WASTE FACTOR = 537.05 TONS ≈ 538 TONS

2. GRADE NATIVE MATERIAL TO DESIGN GRADE. COMPACT THE NATIVE MATERIAL TO 85 PERCENT MAXIMUM DENSITY AT THE BOTTOM OF THE RETENTION BASIN AND 95 PERCENT MAXIMUM DENSITY AT SIDE SLOPES AND TOP OF EMBANKMENT, ACCESS ROADS, ETC. (FILL)

4,220 CYD

3. INSTALL NEW 10-INCH DIAMETER PVC STORMWATER PIPELINE.

47 L.F.

4. INSTALL NEW P.C.C. HEADWALL.

1 EACH

5. INSTALL NEW 12-INCH DIAMETER PVC STORMWATER PIPELINE.

27 L.F.

6. INSTALL NEW STORMWATER MANHOLE WITH GRATE.

1 EACH

7. CONTRACTOR SHALL CONNECT THE NEW 18-INCH SDR 35 PVC PIPELINE TO THE EXISTING P.C.C. STORMWATER MANHOLE. THE CONNECTION TO THE STORMWATER MANHOLE SHALL BE MADE WITH A CIRCULAR CONCRETE CORING MACHINE. THE CONNECTION SHALL NOT BE ACCOMPLISHED WITH A JACK HAMMER. INSTALL NON-SHRINK GROUT IN THE ANNULAR OPENING FLUSH WITH THE INTERIOR AND EXTERIOR MANHOLE WELL FACE.

2 EACH

8. INSTALL 12-FOOT WIDE CHAIN LINK FENCE AND GAP SECTION.

25 L.F.

9. INSTALL NEW 12-INCH FLAPPER VALVE.

1 EACH

10. CONTRACTOR SHALL RETROFIT THE EXISTING STORMWATER PUMP STATION.

LUMP SUM